A. CLASSIFICATION OF SURIECT MATTER Int.Cl* F16J15/32, F16C19/52, F16C33/78, G01P3/487, B60B35/18  According to International Patent Classification (IPC) or to both national classification and IPC  8. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) Int.Cl* F16J15/32, F16C19/52, F16C19/52, F16C41/00  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitssuyo Shinan Koho 1996-2005 Kokal Jitssuyo Shinan Koho 1971-2005 Toroku Jitssuyo Shinan Koho 1996-2005 Electronic data base consulted during the international search (name of data base and, where preciscable, search terms used)  C. DOCUMENTS CONSIDERED TO BE RELEVANT  Category*  Cliation of documenc, with indication, where appropriate, of the relevant passages  Y JP 1-316519 A (SKF GmbH.), 21 becomber 1, 1989 (21.12.89), Page 2, Iowas right column, line 7, Fig. 1 4 US 4946296 A Column 2, line 41 to column, 3, line 19 4 DB 3809904 A1 6 FR 2629155 A1  8 IT 1232592 B  2 Further documents are listed in the continuation of Box C.  Special categories of died documents  "Fee allies application or patent between the published on or effect the international single decision or patent between the published on or effect the international case of the single columns of the column and the continuation of a documents of the column and the continuation of a documents of the column and the continuation of a document of the column and the continuation of a document of the column and the continuation of a document of the column and the continuation of a document of the column and the continuation of a document of the column and the continuation of a document of the column and the continuation of a document of the column and the continuation of a document of the column and the continuation of a document of the column and the continuation of a document of the column and the continuation of a document of the column and the column and the continuation of t	INTERNATIONAL SEARCH REPORT	International application No.
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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) Int. C1	A. CLASSIFICATION OF SUBJECT MATTER Int.Cl7 F16J15/32, F16C19/52, F16C33	/78, GOlP3/487, B60B35/18
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Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.  Y JP 1-316519 A (SKF GmbH.), 21 December, 1989 (21.12.89), Page 2, lower right column, line 12 to page 3, upper right column, line 7; Fig. 1  & US 4946296 A Column 2, line 41 to column 3, line 19  & DE 3809904 A1 & FR 2629155 A1  EIT 1232592 B  ** Speak categories of cited documents:  "A" Speak categories of cited documents:  "A" Speak categories of cited documents:  "A" Constituting be general state of the art which is not considered to be of gratification at each of the continuation of Box C.  "E" carries application or patent but published on or sfer the International filing date or priority claims in the carries application or patent but published on or sfer the International filing date or priority claims in the carries application or patent but published on or sfer the International filing date or priority claims in the carries application or patent but published on or sfer the International scarch report document referring to an oral disclosure, use, chibition or other special reason (as specified)  "O" document referring to an oral disclosure, use, chibition or other special reason (as specified)  "O" document referring to an oral disclosure, use, chibition or other special reason (as specified)  "O" document referring to an oral disclosure, use, chibition or other special reason (as specified)  "O" document referring to an oral disclosure, use, chibition or other special reason (as specified)  "O" document referring to an oral disclosure, use, chibition or other means special reason (as specified)  "O" document referring to an oral disclosure, use, chibition or other means special reason (as specified)  "O" document referring to an oral disclosure, use, chibition or other special reason (as specified)  "O" document referring to an oral disclosure, use, chibition or other means special reason (as specified)  "O" document referring to an oral disclosure, use, chibition or other means to a c	Electronic data base consulted during the international search (name of	data base and, where practicable, search terms used)
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Special categories of cited documents:  "A" document dofining the general state of the art which is not considered to be of particular relevance  "E" earlier application or patent but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other priority date claimed  "P" document published prior to the international filing date but later than the priority date claimed  Date of the actual completion of the international search O8 March, 2005 (08.03.05)  Name and mailing address of the ISA/  Japanese Patent Office  "C" Authorized officer  "T" later document published after the international filing date or priority date and not in conflict with the application but cled to understand the principle or theory underlying the invention and the principle or theory underlying the invention cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family  Date of the actual completion of the international search (08 March, 2005 (08.03.05)  Authorized officer  Telephone No.	21 December, 1989 (21.12.89), Page 2, lower right column, lipe 7; I & US 4946296 A Column 2, line 41 to column 3 & DE 3809904 A1 & FR & IT 1232592 B	line 12 to page 3, Fig. 1 3, line 19
"A" document dofining the general state of the art which is not considered to be of particular relevance  "E" earlier application or patent but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another eitation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other priority date claimed  "P" document published prior to the international filing date but later than the priority date claimed  Date of the actual completion of the international search 08 March, 2005 (08.03.05)  Name and mailing address of the ISA/  Japanese Patent Office  date and not in conflict with the application but clied to understand the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "C" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is alone  "Y" document of particular rele	Further documents are listed in the continuation of Box C.	See patent family annex.
OB March, 2005 (08.03.05)  Name and mailing address of the ISA/ Japanese Patent Office  Facsimile No.  Z2 March, 2005 (22.03.05)  Authorized officer  Telcphone No.	"A" document defining the general state of the art which is not considered to be of particular relevance  "E" carlier application or patent but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the	date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X"  document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y"  document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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International application No. PCT/JP2004/016493

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Y	JP 2002-327847 A (Koyo Seiko Co., Ltd.), 20 February, 2002 (20.02.02), Claim 1; Figs. 2 to 4 (Family: none)		2,3,5,6	